

FIGURE 1

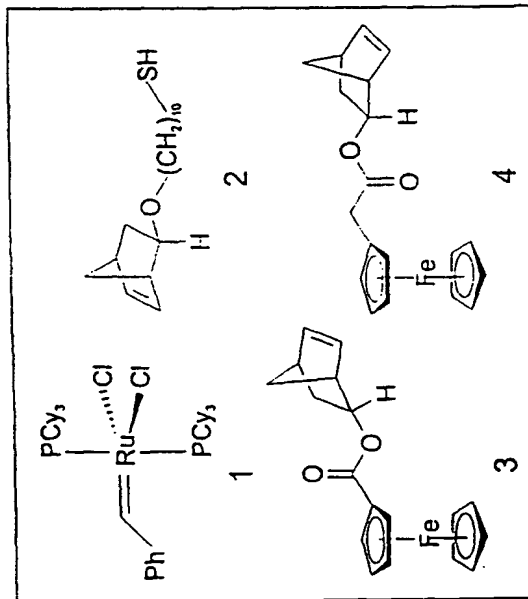
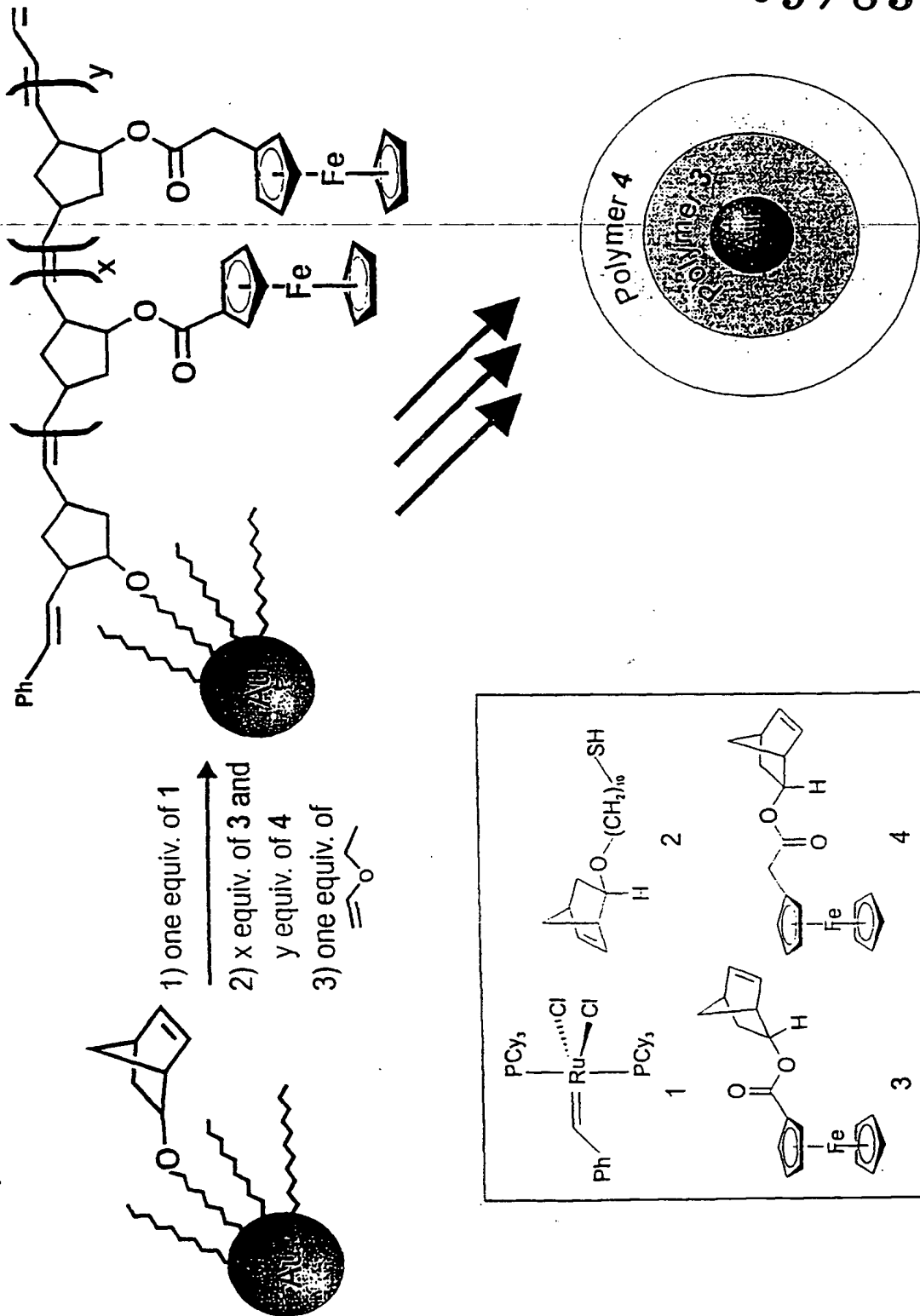


FIG. 1 is a schematic diagram of the synthesis of a core-shell nanoparticle.

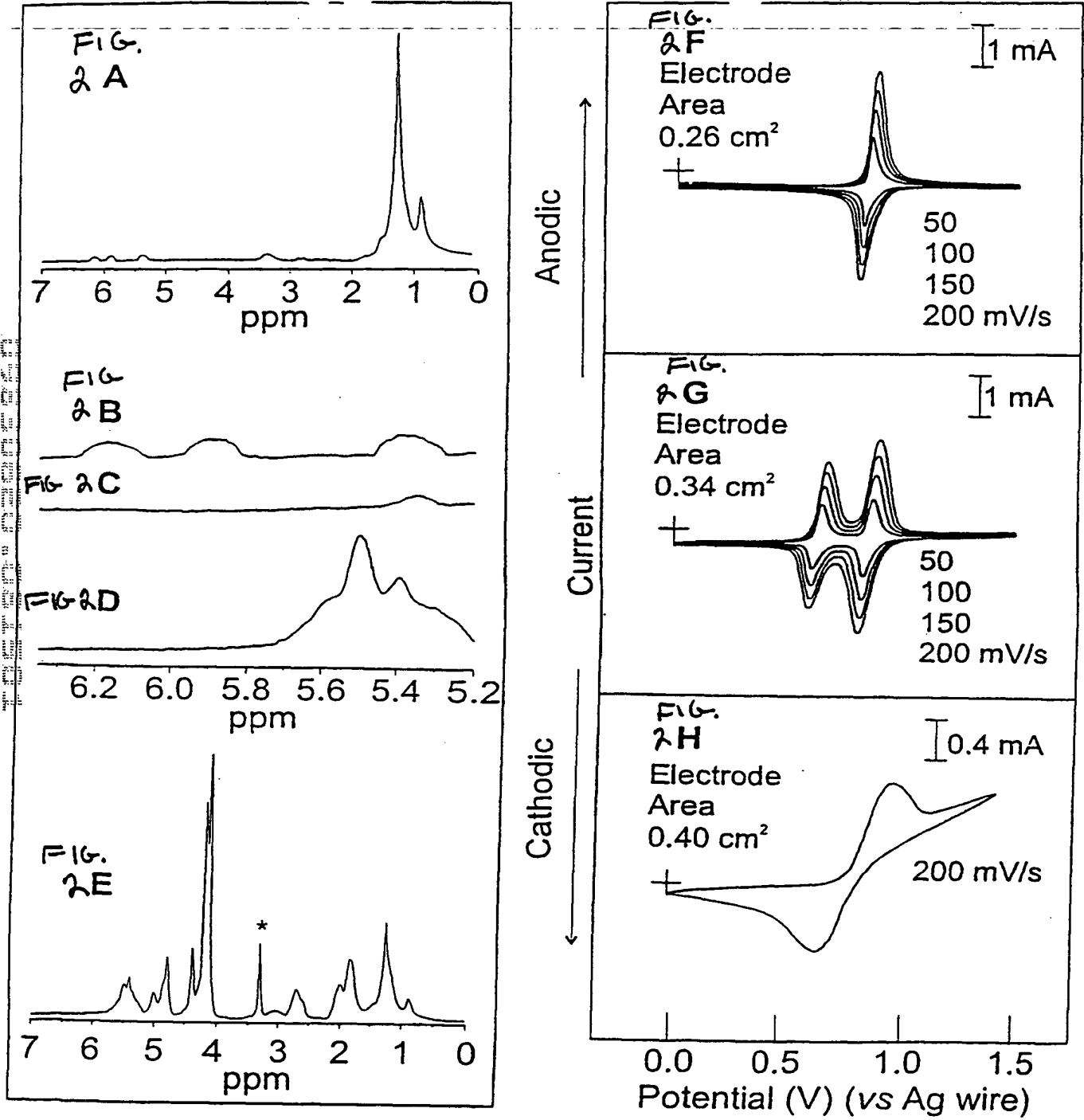


Figure 2

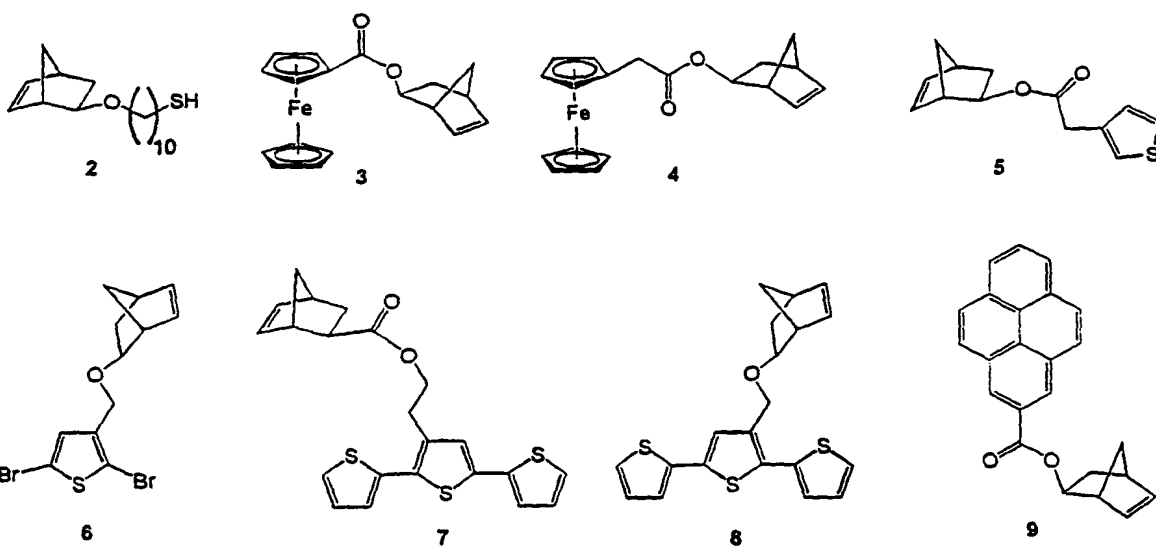
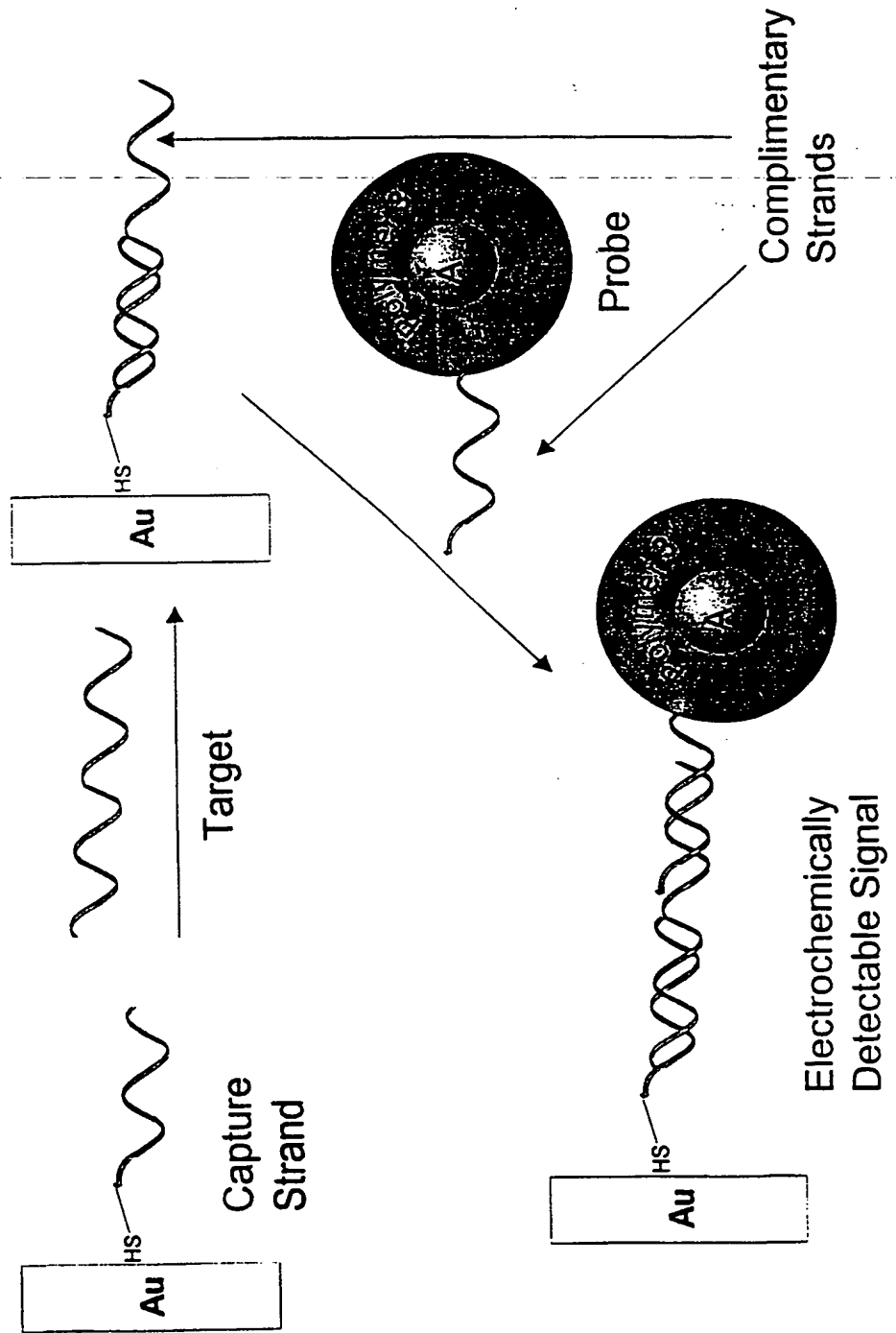


FIGURE 4

FIGURE 5A



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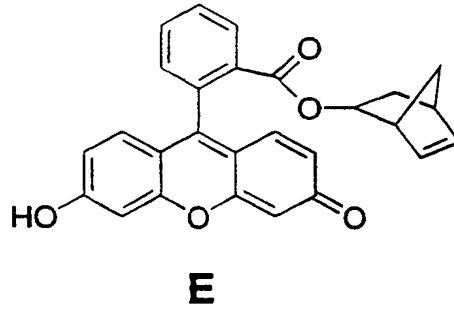
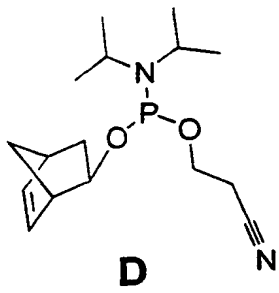
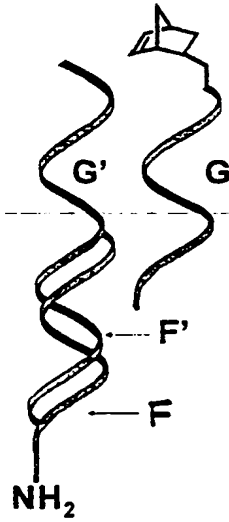
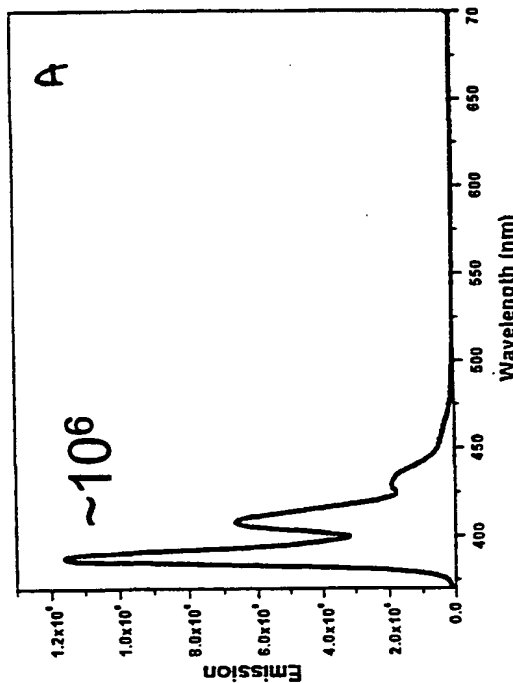
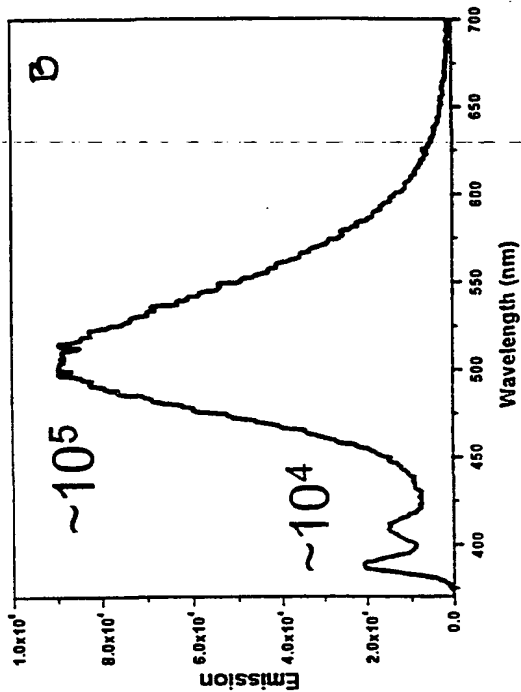
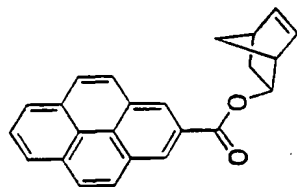
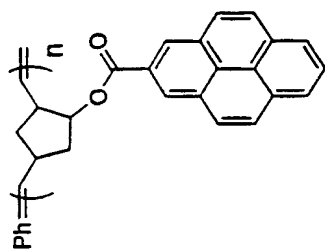


FIG. 5B

FIGURE 6



Excimer Formation: $A^* + A \rightleftharpoons A^*A$

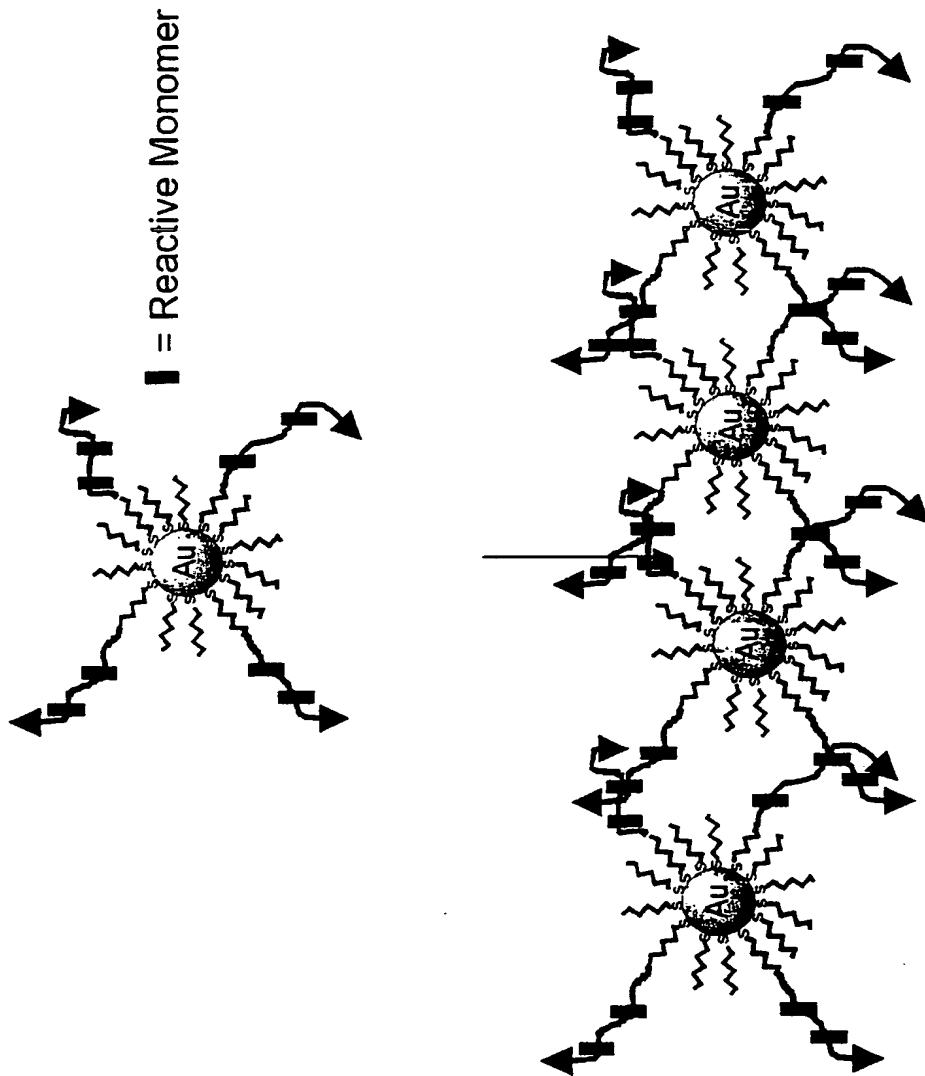


FIG. 7A

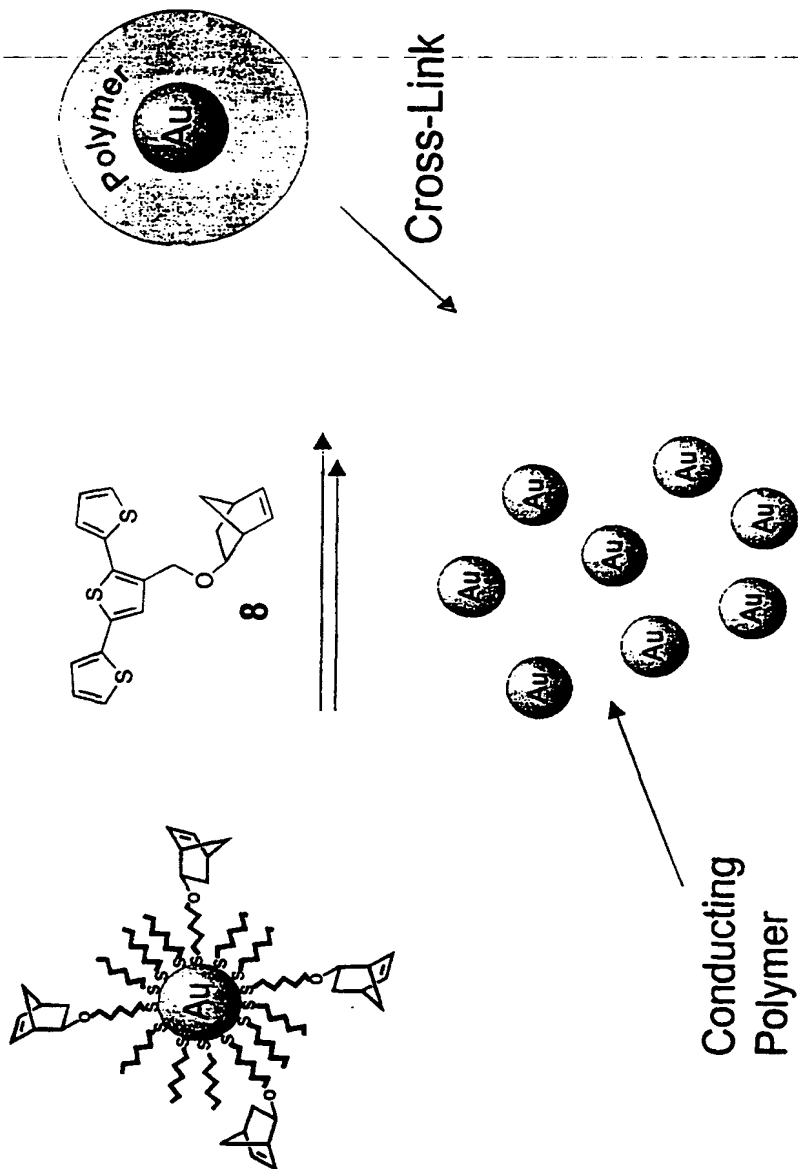


FIG. 7B

FIG. 7B is a schematic diagram of a cross-linking reaction. The diagram shows a polymer matrix containing a central gold nanoparticle (Au) on the left. An arrow labeled "Cross-Link" points to the right. Below this, a chemical structure labeled "8" is shown, which consists of a central ring system with two thiophene rings and a dicyclopentadiene moiety. To the right of structure 8 is a double-headed vertical arrow. Further right, a cluster of gold nanoparticles (Au) is shown, with an arrow pointing to it from the label "Conducting Polymer".

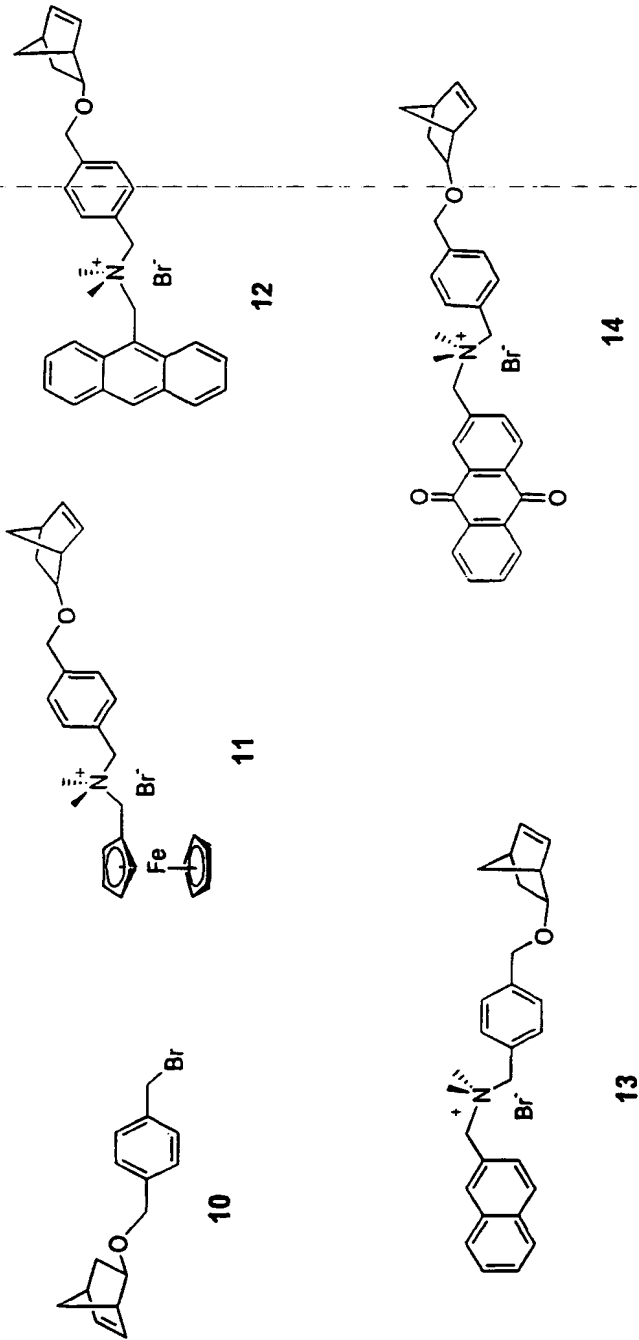


FIG. 8A

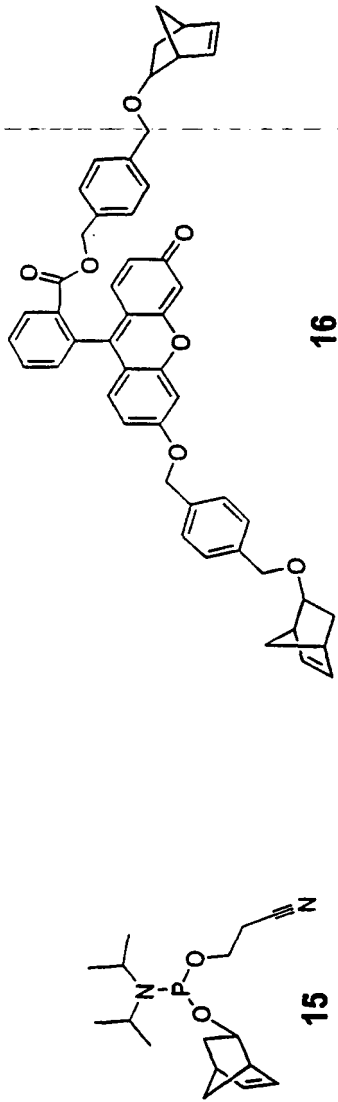


FIG. 8B